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Hydraulic Fracturing: Restoring Public Health and Safety as a Top Priority

Brian Barnes
University of Nebraska-Lincoln, brian.barnes91@gmail.com

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By Brian Barnes

brian.barnes91@gmail.com

While no one was looking, shale gas drilling companies implemented hydraulic fracturing, or "fracking", in around 90 percent of the roughly 500 thousand active natural gas wells in the United States. In many cases, the already lax safety regulations were completely ignored and loopholes exploited to expedite the production process. Until a proper set of policies are implemented that ensure public health and safety, the use of hydraulic fracturing should be halted.

Fracking was first developed in 1949, but exploded with the advent of horizontal drilling in the 1990s, leading to a near doubling in size of the United States natural gas industry. Clearly the influx of shale oil and gas has improved our energy security, at least for now. Drilling companies also tout the environmental benefits of natural gas as the solution to our need for clean energy, but this is nothing more than an attempt to gain support by riding the green movement.

Long term energy security needs sustainability, which shale gas cannot provide.

It's true that the combustion of natural gas releases less greenhouse gas (GHG) emissions, but a lifecycle approach is needed when evaluating total emissions potential, according to a study by Dr. Robert W. Howarth at Cornell University. A fracked well releases up to 7.9% of the

methane, a far more potent GHG than CO_2, to the atmosphere due to leaks and periodic venting. This means that over 20 years, the footprint of shale gas is significantly larger than that of conventional gas, oil, and even coal.

That's just the beginning.

There is a long list of externalities from hydraulic fracturing, including groundwater and aquifer contamination, consumption of fresh water, and effects of toxic chemicals in the waste water on health and the environment. While the full effects on public health are not yet known, it is generally agreed that the risks are very real. There have been over a thousand complaints filed over these issues, and the threat was apparent enough that four cities in Colorado voted to ban hydraulic fracturing on November 6th, 2013.

Citizens should not have to win a vote in order to protect their health from the unchecked and potentially dangerous actions of gas companies.

The concerns are not new by any means, so the fact that fracking has continued largely unchecked for two decades is simply unacceptable. The federal regulations are full of convenient exemptions for fracking, including the Clean Water Act, the Safe Drinking Water Act, and the Resource Conservation and Recovery Act, to name a few. Corporations are allowed to keep toxic chemicals considered trade secrets away from public eyes. The public, it seems, doesn't even have the right to know what chemicals are flowing next to their groundwater.

According to the EPA website, "[w]astewater associated with shale gas extraction can contain high levels of total dissolved solids (TDS), fracturing fluid additives, metals, and naturally occurring radioactive materials." Better yet, there is no comprehensive set of standards for wastewater disposal that gas companies have to follow. "As a result, some shale gas wastewater

is transported to treatment plants (publicly owned treatment works (POTWs) or private centralized waste treatment facilities (CWTs)), many of which are not properly equipped to treat this type of wastewater," the EPA continues.

The public is complaining of municipal water contaminated with chemicals and escaped gas, ill family members, pets, and livestock, and large fish kills in local rivers. By the EPA's own admission, millions of gallons of contaminated flowback water is either being injected underground or sent to treatment plants that are incapable of handling the waste.

To their credit, the EPA is "undertaking a national study to understand the potential impacts of hydraulic fracturing on drinking water resources." However, the study won't even be submitted for peer review until 2014. In the mean time, oil and shale gas companies are simply allowed to drill, baby, drill, and the production is increasing rapidly.

The introduction to the EPA webpage on hydraulic fracturing states, "Responsible development of America's shale gas resources offers important economic, energy security, and environmental benefits." That statement is true. But the painful truth is that there is nothing responsible about the way hydraulic fracturing for natural gas has been developed or regulated to this point. The EPA study may lead to important updates to, and enforcement of, fracking regulations. But until that time comes, it is completely unethical for shale gas production to continue while the public suffers.